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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/617,308      | 07/14/2000  | Toshitaka Agano      | Q58739              | 8383             |

7590 04/18/2006

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT PAPER NUMBER

2629

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |  |   |  |
|------------------------------|--|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/617,308   | <b>Applicant(s)</b><br>AGANO, TOSHITAKA |  |
|                              | <b>Examiner</b><br>Abbas I. Abdulsalam | <b>Art Unit</b><br>2629                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-13,16-19 and 22-27 is/are rejected.
- 7) ☒ Claim(s) 7,8,14,15,20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed on 01/24/06 have been fully considered but they are not persuasive.

Applicant argues that the cited reference, Kazutoshi (Japanese Publication # 04-068391) does not teach displaying a monochromatic image in a color display device. However, as shown in the art rejection below, Kazutoshi teaches a color liquid crystal display device (54) in which gradation of white (display ON) is illustrated. This teaching of Kazutoshi reads over the claim limitation as presented by the applicant, and the distinction argued is not reflected in the claim. Note that the examiner reserves the right to interpret in the broadest possible way.

Applicant argues that the reference does not teach displaying the monochromatic image having a higher gradation resolution than reproduction of each of the R, G and B cells. However as mentioned in the art rejection below, Kazutoshi teaches gradations of white and display data in terms of RGB in a pixel. One skilled in the art would ascertain that it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits). Hence by the virtue of inherency, Kazutoshi's teaching reads over the claim limitation. Again the claim limitation is broad and the distinction argued is not reflected in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9-13, 16, 19 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazutoshi (Japanese Publication # 04-068391).

Regarding claim 1, Kazutoshi teaches an image display method for displaying a monochromatic image (see the abstract, display ON) with a color display device in which a unit pixel is compressed of R, G and B cells (see the abstract, array of RGB filters constituting one pixel), comprising the step of displaying the monochromatic image having a higher gradation resolution than reproduction performance of each of the R, G and B cells in said color display device (see the abstract, increasing gradations of white, note it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits).

Regarding claim 10, Kazutoshi teaches an image display apparatus comprising a color display device in which a unit pixel is composed of R, G and B cells; (see the abstract, array of RGB filters constituting one pixel) a data allocating unit by which input data of a monochromatic image to be displayed on said color display device is allocated to R, G and B data for the R, G and B cells, respectively; (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel); and a processing

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unit by which the R,G and B data of the monochromatic image obtained by allotment by said data allotting unit is output to the R, G and B cells for display on said color display device (it is inherent that DR, DG and DB being outputted from a display system, is done by a processor), wherein the monochromatic image is displayed having a higher gradation resolution than reproduction performance of each of the R, G and B cells in said color display device(see the abstract, increasing gradations of white, note it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits).

Regarding claim 2, Kazutoshi teaches one pixel of said monochromatic image is displayed using said unit pixel composed of said R, G and B cells (see the abstract, display ON, and RGB filters constituting one pixel).

Regarding claim 3, Kazutoshi teaches input data of said one pixel of said monochromatic image is allotted to said R, G and B cells of said unit pixel (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claims 4 and 11, Kazutoshi teaches a minimum value and a maximum value of said input data are respectively allowed to correspond to approximate minimum and maximum luminance values as obtained by combining said R, G and B cells (see the abstract, display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claim 5, Kazutoshi teaches the maximum value of said input data is converted to a sum of values fro R, G and B cells and used as a new set of input data (see

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the abstract, display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claim 6, Kazutoshi teaches data for each of the RGB cells in said input data has been obtained by generally equal allotment (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claims 9 and 16, Kazutoshi teaches data for each of said R, G and B cells is allotted to data for a plurality of time-divided frames and the data allotted to each of said time-divided frames is used to perform time divided driving of said R, G, B cells independently of each other to produce said monochromatic image (see the abstract, display ON, display dot data, DR, DG, DB, RGB filters constituting one pixel and timing signal, STM).

Regarding claims 12, Kazutoshi teaches said data allotting unit converts the maximum value of said input data to become equal to a sum of values for R, G and B cells (see the abstract, display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claim 13, Kazutoshi teaches data for each of the R, G and B cells in said input data has been obtained by generally equal allotment (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claims 19, Kazutoshi teaches luminance values that are displayed with said unit pixel, are at least three times as many as those that are displayed with each of

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the R, G and B cells (see the abstract, display dot data, DR, DG, DB and difference in brightness. Note the inherent RGB bits with each color being one third of the whole).

Regarding claims 24-25, kazutoshi teaches the monochromatic image corresponds to a gradation of N bits, and said ach of the R, G, B cells corresponds to a gradation resolution corresponding to M bits, where  $N > M$  (it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits).

Regarding claims 26-27, Kazutoshi teaches said color display device is a liquid crystal display device (see the abstract (54)).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-18 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazutoshi (Japanese Publication # 04-068391) in view of Ohta (USPN 6608927).

Regarding claims 17-18, Kazutoshi does not teach an image being used for medical diagnosis.

Ohta on the other hand teaches color processing with respect to various kinds combinations of image input devices and image output devices, e.g., a case of outputting a color image separated by a flat bed scanner to a color printer, or outputting the same

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color separated image obtained by the flat bed scanner on the CRT monitor, and the like (col. 12, lines 66-67 and col. 13, lines 1-7).

Both Kazutoshi and Ohta teach about color processing and one of ordinary skill in the art would have looked toward Ohta for an applicable device and discipline.

Regarding claims 22-23, Ohta teaches data for each of the R, G and B cells in said input data, if expressed by coordinates (x,y) on CIE chromaticaaaly diagram is within a region bounded by at least three coordinates (col. 7, lines 7-15).

#### *Allowable Subject Matter*

4. Claims 7-8, 14-15 and 20-21 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the



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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulsalam

Examiner

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April 11, 2006

A handwritten signature in black ink, appearing to read 'Richard Hjerpe', with a stylized, cursive script.

**RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**